L 9634-66

ACC NR: AP5027712

ture, which is controlled by platinum-platinorhodium thermocouple 3 and pyrometer 1. Metal container 8 is filled with the test composition, with cone valve 7 in closed position, and maintained at the fixed temperature for 30 min. Thereupon, the outflow time of the electrolyte is measured with the aid of a stopwatch. The electrolyte flowing out of container enters receiver 2 and may be re-used for additional tests. Findings: an increase in the percentile content of Na_2CO_3 considerably reduces electrolyte viscosity. For example a 5% increase in Na_2CO_3 concentration reduces the outflow time of the electrolyte by 1.5 times at 800°C. The dependence of electrolyte viscosity on Na_2CO_3 content is illustrated by Fig. 2, which shows that as the Na_2CO_3 concentration is increased to 30% the viscosity of electrolyte markedly decreases. This makes it possible to reduce boronizing temperature to 800-820°C. Thus, a desirable composition of electrolyte for electrochemical boronizing would be: 30% borax, 40% boric oxide, and 30% Na_2CO_3. Orig. art. has: 3 figures.

SUB CODE: 07, 11, 13/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 000

L 53917-65 EWT(m)/EWP(i)/EPR/EWP(t)/EWP(b) Ps-4 IJP(c) JD

ACCESSION NR: AP5011420 UR/0073/65/031/00 /0359/0363

17
18
B

AUTHOR: Galushko, V. P., Bondar', V. V.

TITLE: Anodic behavior of aluminum under electropolishing conditions

27

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 4, 1965, 39-363

TOPIC TAGS: aluminum anode, electropolishing, anode potential, polarization curve, aluminum oxide layer

ABSTRACT: The article is devoted to a study of the anodic behavior of aluminum in $H_2SO_4 - H_3PO_4$ and $H_2SO_4 - H_3PO_4 - CrO_3$ aqueous electrolytes aimed at determining the stable and unstable stationary portions of the polarization curve and also portions where the process of electropolishing takes place. I - V, φ - t, and V - t curves were plotted. All the I - φ curves display three distinct portions (see Fig. 1 of the Enclosure): in the first (a - b), the current density increases with the anode potential; the second (b - c) corresponds to the unstable anode potential, where a sharp rise in anode potential is associated with a smooth rise in current density; the third which has a negative slope, is associated with oscillatory processes (pronounced fluctuation of the anode potential and current intensity in the cell). It was found that the electropolishing of aluminum could be carried out best in the region of the portion having a negative slope: at the start of this

L 53917-65
ACCESSION NR: AP5011420

portion, oxide layers are formed and broken down, marking the beginning of the electro-polishing process. As the current density is increased further, the voltage becomes more stable, and a high-quality electropolishing takes place. Orig. art has: 4 figures and 1 table.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

SUBMITTED: 26Jun63 ENCL: 01 SUB CODE: IM, IC

NO REF SOV: 006 OTHER: 000

Card 2/3

L 53917-65
ACCESSION NR: AP5011420

ENCL: 01

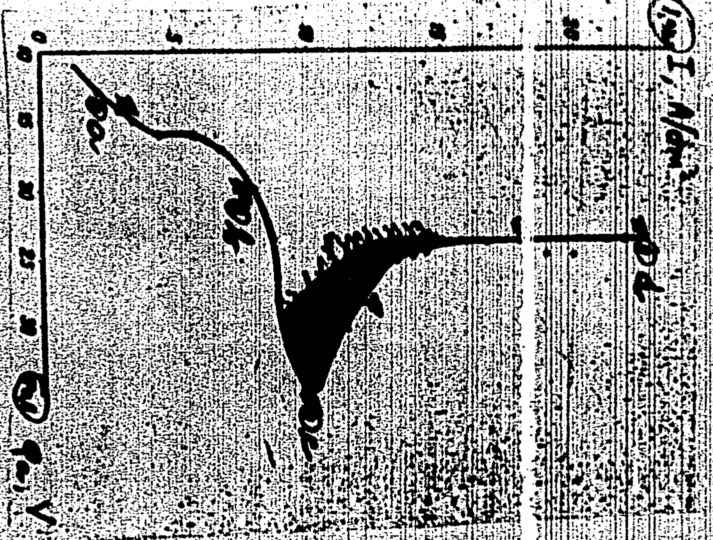

Fig. 1. Current density versus anode potential in an $H_2SO_4 - H_3PO_4 - CrO_3$ electrolyte; the anode is AOO aluminum.

Card 3/3

GALUSHKO, V.P.; MASAL'SKIY, [illegible]; VARENKO, Ye.[illegible]; [illegible] BONKAL[illegible]SKIY, Yu.N.

Effect of the bath composition on the temperature of the electrochemical boride formation on steel. Metalloved. i term. obr. met. no.11:40-41 N '65. (MIRA 18:12)

1. Dnepropetrovskiy gosudarstvennyy universitet.

KOVTUN, V.N.; GALUSHKO, V.P.

Measurement of main components of the complex resistance of an electrode. Zhur. fiz. khim. 39 no.4:1028-030 Ap '65. (MIRA 19:1)

1. Dnepropetrovskiy gosudarstvennyy universitet. Submitted Dec. 26, 1963.

GALUSHKO, V.P.; VDOVIKO, Ye.A.

Cathodic reduction of bismuth oxide. Zhur.prikl.khim. 38 no.11:2487-2490 N '65. (MIRA 18:12)

1. Dnepropetrovskiy gosudarstvennyy universitet imeni 300 letiya vossoyedineniya Ukrainy s Rossiyey. Submitted February 29, 1964.

TERK, D.; GAL'VER, G., ispolnyayushchiy obyazannosti dotsenta

Improving the planning and accounting systems in ship repairing yards. Mor. flot. 24 no.5:30-31 My '64. (MIRA 18:12)

1. Nachal'nik planovo-ekonomicheskogo otdela sudoremontnogo zavoda No.1 (for Terk). 2. Odesskiy institut inzhenerov morskogo flota (for Gal'ver).

GALUSHKO, V.P.; LIMIN, B.Ye.

Phenomenon of resonance during anodic dissolution of copper in orthophosphoric acid. Ukr.khim.zhur. 31 no.5:474-477 '65.
(MIRA 18:12)

1. Dnepropetrovskiy gosudarstvennyy universitet. Submitted July 3, 1963.

GALUSHKO, V.P.; ZAVGORODNYAYA, Ye.F.; RODAK, Yu.P.

Cathodic reduction of some sparingly soluble cobalt compounds. Zhur. prikl. khim. 38 no. 10:2349-2351 O '65. (MIRA 18:12)

1. Dnepropetrovskiy gosudarstvennyy universitet imeni 300-letiya vossoyedineniya Ukrainy s Rossiyey. Submitted Nov. 12, 1963.

GALUSHKO, V.P.; FEDASH, P.M.; VARENKO, Ye.S.

Nature of the acceptor in the electrolytic dissolution of copper in orthophosphoric acid. Ukr. khim. zhur. 31 no. 11:1214-1219 '65 (MIRA 19:1)

1. Dnepropetrovskiy gosudarstvennyy universitet.

MARINOV, Nikolay Aleksandrovich; OBRUCHEV, V.A., akademik, otvetstvennyy redaktor[deceased]; ZAYTSEV, N.S., redaktor; GALUSHKO, Ya.A., redaktor izdatel'stva; PAVLOVSKIY, A.A., tekhnicheskiy redaktor.

[Stratigraphic geology of the Mongolian People's Republic] Stratigrafiia Mongol'skoi Narodnoi Respubliki. Moskva, Izd-vo Akad. nauk SSSR. 1957. 267 p. (MIRA 10:6)
(Mongolia--Geology, Stratigraphic)

GALUSHKO, Ya. A.

Peneplain surfaces in the trappean zone of the Central Siberian Plateau. Izv. AN SSSR. Ser. geog. no.1:84-90 Ja-F '58.
(MIRA 11:2)

1. Izd-vo AN SSSR.
(Central Siberian Plateau--Physical geography)

GALUSHKO, Ya.A.

Macrorelief and distribution of some useful minerals in the trap zone of central Siberia. Dokl.AN SSSR 133 no.1: 189-192 Jl '60. (MIRA 13:7)
(Siberian Platform--Geology, Structural)
(Siberian Platform--Mines and mineral resources)

GALUSHKO, Ya.A.

Macrorelief and diamond fields in the trapp zone of central Siberia. Izv. AN SSSR. Ser. geog. no.5:69-75 S-O '60. (MIRA 13:10)

(Siberian Platform--Diamonds)
(Siberian Platform--Geology, Structural)

VOZIN, Valentin Fedorovich; KASHIRTSEV, A.S., otv.red.; GALUSHKO, Ya.A., red.
izd-va; ASTAF'YEVA, G.A., tekhn.red.; GUS'KOVA, O.M., tekhn.red.

[Stratigraphy of Mesozoic sediments in the Yana basin] Stratigrafiia mezozoiskikh otlozhenii basseina r. IAny. Moskva, Izd-vo Akad. nauk SSSR, 1962. 117 p. (Akademiia nauk SSSR. IAkutskii filial, Yakutsk. Trudy. Seriia geologicheskaia, no.15) (MIRA 16:3)
(Yana Valley--Geology, Stratigraphic)

VASHCHENKO, P.; GALUSHKO, Ye. [Halushko, IE.]; KONSEVICH, A. [Konsevych, A.]

Valuable research on the history and economics of the Western Ukraine. Dop.AN URSR no.7:997-999 '60. (MIRA 13:8)
(Ukraine, Western--History)

[illegible]

VINOGRADOV, V.V.; GALUSHKO, Yu. A.

Ligature of the hepatic artery as a means of treating portal hypertension. Khirurgiia, Moskva no.5:61-65 My '55. (MLRA 8:9)

1. Iz fakul'tetskoy khirurgicheskoy kliniki imeni S.I. Spasokukotskogo (dir.-prof. A.N. Bakulev) II Moskovskogo meditsinskogo instituta imeni I.V. Stalina

(ARTERIES, HEPATIC, surg.
ligation, in therapy of portal hypertension)
(HYPERTENSION,
portal, surg., ligation of portal hepatic artery)

GALUSHKO, Yu. A.

GALUSHKO, Yu. A.: "An experiment in tying off the hepatic artery in treating portal hypertonia." Second Moscow State Medical Inst imeni I. V. Stalin. Moscow, 1956. (Dissertation for the Degree of Candidate in Medical Sciences.)

Source: Knizhnaya letopis' No 40 1956 Moscow

[illegible]

BAKULEV, Aleksandr Nikolayevich, 1890- ; GALUSHKO, Yu.A.

[Ligature of the hepatic artery in treating hypertension] Opyt perevyazki pechenochnoi arterii pri lechenii portal'noi gipertonii. Moskva, Medgiz, 1957. 111 p. (MIRA 11:4)

(HYPERTENSION) (HEPATIC ARTERY--LIGATURE)

BAKULEV, A.N., prof., KOLESNIKOV, S.A., doktor med.nauk., GAIUSHKO, Yu.A.,
kand.med.nauk (Moskva)

Surgical treatment of mitral insufficiency. Klin.med.36 no.8:25-32
Ag '58 (MIRA 11:9)

1. Iz Instituta grudnoy khirurgii AMN SSSR (dir. - prof. A.N.
Bakulev).
(MITRAL VALVE, dis.
insuff., surg. (Rus))

VINOGRADOV, V.V., GALUSHKO, Yu.A.

Surgical treatment of mitral insufficiency; a survey. Vest.khir. 81 no.7:106-118 Jl '58 (MIRA 11:8)

1. Iz Instituta grudnoy khirurgii AMN SSSR (dir. - prof. A.N. Bakulev) i fakul'tetskoy khirurgicheskoy kliniki im. S.I. Spasokukotskogo (zav. - prof. A.N. Bakulev) 2-go Moskovskogo meditsinskogo instituta im. N.I. Pirogova. Adres avtorov: Moskva, Bol'shaya Kaluzhskaya ul., d.8, Institut grudnoy khirurgii AMN SSSR.

(MITRAL VALVE, dis.
insuff., surg., review (Rus))

GALUSHKO, Yu. A.; LEVANT, A. D.; ANANIKYAN, P. P.

Surgical treatment of tricuspid insufficiency; survey of the literature. Grud. khir. 4 no.1:121-126 Ja-F '62. (MIRA 15:2)

1. Iz Instituta grudnoy khirurgii AMN SSSR (dir. - prof. S. A. Kolesnikov, nauchnyy rukovoditel' - akad. A. N. Bakulev)

(HEART—VALVES—DISEASES)

[illegible]

Rumania/Diseases of Plants. Diseases of Cultivated Plants O-3

Abs Jour : Ref Zhur-Biol., No 1, 1958, 1956

Author : Galusinschi A.
Inst : Not given
Title : Observations of Mildew Affection of Grapevine in Dragazhanski Vineyards

Orig Pub : Gradina, via si livada, 1957, 6, No 6, 69-74

Abstract : No abstract

Card 1/1

USCOMM-DC-55662

GALUSINSCHI, AL.

③

SURNAME, Given Names

Country: Rumania

Academic Degrees: -not given-

Affiliation: -not given-

Source Data: Bucharest, Comunicarile Academiei Republicii Populare Romine, Vol XI, No 11, 1961, pp 1365-1371.

"Contribution to the Study of Bacterial Cancer of Vineyards. Preventive and Combattive Measures."

Authors:

RAFAILA, C.
ZINCA, N.
GALUSINSCHI, Al.

ACC NR: AT7000177 SOURCE CODE: UR/3182/65/002/[illegible]/0013

AUTHOR: Andronikashvili, E. L.; Politov, N. G.; Getiya, M. Sh. Galustashvili, H. V.

ORG: none

TITLE: Radiative variation of dislocation density in alkali halide crystals irradiated in a reactor at normal and low temperatures

SOURCE: AN GruzSSR. Institut fiziki. Elektronnyye i ionnyye protsessy i tverdykh telakh, v. 2, 1965, 3-13

TOPIC TAGS: lithium fluoride, alkali halide, neutron irradiation, gamma irradiation, crystal dislocation phenomenon

ABSTRACT: Samples were irradiated in the Institute of Reactor Technology at 155 and 110K at the Institute of Physics, AN GruzSSR. The dependence of dislocation density on irradiation time and temperature was studied. Dislocation density was determined in two ways: 1) the number of dislocations were counted in random portions of a series of irradiated samples with the aid of a standard, and 2) the relative variation in dislocation density on irradiated surfaces was determined by comparison with a control surface of one sample (mirror crystal method). The latter method is more accurate. Curves are plotted for the number of dislocations in LiF crystals as dependent on irradiation time in the vertical experimental reactor channel ($nv = 1.1 \cdot 10^{12}$ neutrons/cm^2 sec, 85 mm thick lead target attenuating the gamma radiation), in the verti-

Card 1/2

ACC NR: AT7000177

cal low temperature loop ($nv = 5.5\cdot10^{11}$ neutrons/cm^2 sec), and in the horizontal low temperature loop ($nv = 1.8\cdot10^{12}$ neutrons/cm^2 sec). More radiation-generated dislocations and fewer vacancies occurred in samples exposed to the attenuated gamma radiation. The dislocations in these crystals apparently form from the condensation of point defects. The ratio D/D_0 was measured after sample irradiation in a beam of $1.8\cdot10^{12}$ neutrons/cm^2 sec at 100K in a range of energies from $3\cdot10^{14}$ to 10^{15} nvt. The ratio increases with increase in irradiation time, and the dislocation density at 110K is about 20% less than at 300K. Results at 155K coincide with those at 300K. The effect of annealing on dislocation density is described. The dependence of dislocation density in LiF crystals on the temperature during irradiation confirms the condensation theory of dislocation generation. Selective etching of the test samples revealed the nature and distribution of point defects. Microphotographs of crystals etched after irradiation show extensive pitting, which increases with higher dosages. Effects of irradiation and subsequent annealing on the density and nature of pitting and the mechanical properties of the crystals are described. From the experimental data it is concluded that irradiation causes point defects to merge. These defects have greater dynamic resistance to the motion of dislocations than do individual vacancies, interstitial atoms, and individual impurity atoms. Annealing causes the point defects to unite into plane cavities. The annealing time and temperature and the rate of cooling all affect the mechanical properties of the irradiated crystals. The authors thank L. F. Vorozheykina for making the microhardness measurements, M.F. Zhvaniy for monitoring the neutron beams, and G. N. Garevanishvili and G. I. Ayvazov for irradiating the samples. Orig. art. has: 7 figures, 4 tables. [WA-95]

SUB CODE: 20,11/ SUBM DATE: none/ ORIG REF: 007/ OTH REF: 003

Card 2/2

TSKHVIRASHVILI, D.G.; GALUSTASHVILI, V.V.

Passing of weak mineral acids to saturated water vapor. Soob. AN Gruz. SSR 30 no.5:625-629 My '63. (MIRA 16:11)

1. Institut energetiki imeni A.I.Didebulidze AN GruzSSR, Tbilisi. Predstavleno chlenom-korrespondentom AN GruzSSR P.G.Shengeliya.

ACCESSION NR: AP4012269 S/0089/64/016/001/0065/0067

AUTHORS: Tskhvirashvili, D. G.; Galustashvili, V. V.

TITLE: The behavior of borates and boric acid in boiling reactors.

SOURCE: Atomnaya energiya, v. 16, no. 1, 1964, 65-67

TOPIC TAGS: borates, boric acid, emergency shielding, reactors, boiling reactors, pentaborates, ammonium pentaborate, sodium pentaborate, evaporator, atomic power plants, heat carrier, neutron flux

ABSTRACT: The use of boric acid and ammonium and sodium pentaborates in the emergency shielding of a number of boiling reactors and the possible development of a liquid control system for such reactors has encouraged a study of the distribution of these substances in the liquid and vaporous phases of water. It has been established in a number of special tests that the substances present in water (NaCl and Na_2SO_4), as well as the chief corrosion product of construction materials, iron oxide, do not affect the distribution of borates and boric acid in the water. The similarity between the boric acid distribution in an active EBWR reactor and our experimental data justi-

ACCESSION NR: AP4012269

fies the assumption that the presence of a neutron flux does not have any effect on the conversion of borates and boric acid to steam. The results of the mentioned investigation make it possible to precalculate the borate and boric acid balance in the heat carrier of an atomic power plant. That balance can be fully determined by the solubility of these substances in water and steam. The behavior pattern of boric acid and borates in superheated steam leads to the conclusion that they will not precipitate in the superheaters of atomic power plants with a direct cycle, nor in turbines; the borates and boric acid will be washed away by the water in view of their high degree of solubility. Orig. art. has: 3 Figures, 2 Formulas and 2 Tables.

ASSOCIATION: None

SUBMITTED: 06Apr63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: CH, PH NR REF SOV: 003 OTHER: 002

Card 2/2

ZHERDEV, M.G., red.; GALUSTOV, S.G., red.; SHASHIN, V.D., red.;
PETROVA, Ye.A., ved. red.

[Equipment and technology of drilling wells; transactions] Tekhnika i tekhnologiia bureniia skvazhin; trudy. Pod red. M.G.Zherdeva, S.G.Galustova, V.D.Shashina. Moskva, Izd-vo "Nedra," 1964. 238 p. (MIRA 17:5)

1. Respublikanskoye soveshchaniye po preduprezhdeniyu i bor'be s oslozhneniyami v burenii i obmenu opytom po tekhnike i tekhnologii prokhodki skvazhin. 1962.

KHOLMSKIY, V.G.; GALUSTOVA, L.A.; SHCHERBINA, Yu.V.; BUSLOVA, N.V.

Methods for selecting the optimum cross sections of an open 6 to 10 kv. distribution network. Trudy Inst. elektrotekh. AN URSR no.19:110-117 '62. (MIRA 16:5)

(Electric power distribution) (Electric lines—Overhead)

TSUKERVANIK, I.P.; GALUST'YAN, G.G.

Benzylation and benzoylation of furoic esters. Dokl. AN Uz. SSR 20 no.1:26-29 '63. (MIRA 16:6)

1. Institut khimii rastitel'nykh veshchestv AN Uzbekskoy SSR.
2. Chlen-korrespondent AN Uzbekskoy SSR (for TSukervanik).

(Furoic acid)

GALUSZKA, J.

(31)

[illegible], [illegible] Vol XVIII, No 1, Jan 62 (continued)

9. "Use of [illegible] in [illegible] Against Swine [illegible]," J. [illegible] and C. C[illegible], of [illegible] Research Office for Veterinary Hygiene ([illegible]) in [illegible], J. [illegible] chief (kierownik), and D. [illegible], MD Vet. of [illegible]; pp 25-27.

10. "[illegible] Antibodies in Cattle in the Katowice Voivodship," J. GALUSZKA and D. [illegible], of the Voivodship Research Office for Veterinary Hygiene (Wojewodzki Zaklad Higieny Weterynaryjnej) in Katowice, Prof. Dr. J. [illegible], chief (kierownik) (English summary); pp 27-28.

11. "Studies on the Carrier State of Salmonella and Shigella Strains," (to be published in full in [illegible]) L. [illegible] of the Voivodship Research Office for [illegible] (Wojewodzki Zaklad Higieny etc.) in [illegible], Dr. [illegible], chief (kierownik) (English summary); pp 28-29.

12. "A Case of Listeriosis in Chinchilla and an Attempt to Treat It," J. [illegible], of the Voivodship Research Office for Veterinary Hygiene (Wojewodzki Zaklad Higieny etc.) in Katowice, Prof. Dr. J. [illegible], chief (kierownik); pp 29-31.

13. "Tuberculosis of the Mammary Gland in the Cow Caused by Mycobacterium Tuberculosis, Avian Type," A. [illegible], C. [illegible], and S. [illegible], of the Veterinary [illegible], of Chair of [illegible] (Katedra [illegible]) of the Veterinary Department of the Higher School of Agriculture (WSR) in Wroclaw, Prof. Dr. Alfred [illegible], chief (kierownik), and Chair of Microbiology of the Veterinary Dept. of the WSR in Wroclaw, Prof. Dr. [illegible], chief (kierownik); pp 31-32.

13. "Trichinellosis in Pigs and Wild Boars in the Wroclaw Voivodship," Alojzy R[illegible] and Stanislaw [illegible] of Wroclaw; p 33.

14. "Trichinellosis in Pigs in the [illegible] Between 1945 and 1960," Teodor [illegible] of [illegible]; pp 33-34.

15. "Studies on the Preservation of Bovine Semen. VI. Attempts at Improving the Conditions of Preservation at Room Temperature," L. JASKOWSKI, D. B[illegible] and S. [illegible], of Research Office for the Physiology of [illegible] ([illegible]) of the Institute of [illegible] and [illegible] Nutrition ([illegible] Fizjologii i [illegible]), and of Research Office for Examination and [illegible] ([illegible]) of the Veterinary Institute ([illegible] i [illegible] Rozplodowej) of the [illegible]

— 2/3 —

GALUSKA, M.; POKORNY, K.

Perfect maintenance of machinery. p.333

MECHANISACE ZEMEDELSTVI. (Minsterstvo zemedelstvi) Praha.

Vol. 5, no. 17, Sept. 1955

East European Accessions List Vol. 5 No. 1 Jan. 1956

ARKHIPETS, Ye.Ya. (Kiyev); BONDAROVICH, I.M. (Khar'kov); BULANOV, V.N. (Kiyev); GALUSKIN, V.B. (Kiyev); GOGOTSI G.A. (Nikolayev); GORBUNOVA, N.N., (Kiyev); GORLITSKIY, B.A. (Kiyev); DYADYUSHA, G.G. (Kiyev); KATSNEL'SON, I.Ye. (Dnepropetrovsk); KVITCHUK, E.A. (Kiyev); KIRILLOV, I.A., (Krym) KONOPLYASOVA, N.S. (Chernovtsy); NIKOL'SKIY, V.V. (Kiyev); PONOMARENKO, A.A. (Stanislav); PESCHANSKIY, A.I. (Kiyev); POPOV, V.N. (Kiyev); PTASHNIKOVA, I.V. (Uzhgorod); STESHENKO, N.G. (Kiyev); CHAYKIN, M.M. (Vinnitsa); SHAPOSHNIKOVA, N.N. (Kiyev); SHPORTYUK, V.I. (Kiyev); YANKO, N.M. (Stalinskaya oblast'); SVECHNIKOVA, N., redaktor; SMORODSKIY, V., tekhnicheskiy redaktor

[Tourist routes through the Ukraine] Turistskie marshruty po Ukraine. Kiev, Izd-vo TsK LKSMU "Molod'," 1957. 368 p. (MLRA 10:8)
(Ukraine--Description and travel)

GALUSO, I. A.

"Characteristics of the nidi of the tick relapsing fever in the northern area of tick ()rnithodorus) carriers."

report submitted at the 13th All-Union Congress of the Hygienists, Epidemiologists and Infectionists, 1959.

GALUSO, N.V.

EXCERPTA MEDICA Sec.2 Vol.9/9 Physiology,etc.Sept56

4159. GALUSO N.V. Lab. of Physiol. and Pathol. of Vision, neurol. Inst., AN, SSSR, Moscow. *Conditioned change of the size of the visual field (Russian text) FIZIOL. Ž. 1956, 42/2 (221-224) Tables 3

The visual field attains the maximum extension after 30 min. of dark adaptation and narrows by approximately 15° on exposure to light for 15 sec. (unconditioned stimulus). Conditioned reflexes to acoustic, olfactory (smell of vinegar and thymol) and tactile stimuli were obtained after 20 to 45 repeats, associated with the unconditioned stimulus (exposure to light). A conditioned response to a verbal signal ('now I will put the light on') after 30 min. dark adaptation was obtained immediately without repeats. The conditioned responses (narrowing from 5 to 11°), however, were weaker than the unconditioned reaction. Measurement of the horizontal diameter is sufficiently representative of the changes in the visual field.

Simonson - Minneapolis, Minn.

VARDAPETYAN, A., kand. ist. nauk; GALUSTOV, A., dotsent;
RODYUKOV, V., red.

[Forty years of Soviet Armenia] 40 let Sovetskoi Armenii.
Ashkhabad, Ob-vo rasprostraneniiu polit. i nauchnykh znanii
Turkmenskoi SSR, 1960. 27 p. (MIRA 15:7)
(Armenia—Economic conditions)

GALUSTOV, S.B.; GUZ', D.D.

Development of oil and natural gas industry during the fifth and sixth five-year plan. Biul. tekh.-ekon. inform. no.1:3-7 '57.
(Petroleum industry) (Gas, Natural) (MIRA 11:4)

SHMAREV, A.T., inzh.; YATROV, S.N., inzh.; GALUSTOV, S.G., inzh.

Use of hydraulic rupture of layers in the underground gasification of solid fuels. Mekh.trud.rab. 11 no.9:22-24 S '57. (MIRA 10:11)
(Gasification of coal)

KABANOV, A.F.; GALUSTOV, S.G.; LESETSKIY, V.A.; SOKOLOVSKIY, B.M.

Objectives of petroleum industry workers. Bezop.truda v prom.
5 no.9:8-9 S '61.
(MIRA 14:10)

1. Glavnoye upravleniye neftyanoy i gazovoy promyshlennosti
Vserossiyskogo Soveta Narodnogo Khozyaystva RSFSR.
(Petroleum industry) (Automation)

GALUSTOVA

Galustova: "Surgival complications of brucellosis," (Report), Trudy III Zakavkazsk. s"yezda khirurgov, Yerevan, 1948 (on cover: 1949) p. 296-299

SO: U- 5240, 17 Dec. 53, (Letopis 'zhurnal 'nykh Statey, No. 25, 1949).

1. GALUSTOVA, L. A.

2. USSR (600)

4. Electric Lines - Overhead

7. Using sleet recorders for electric transmission lines in the mountains. Elek. sta. 23 No. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

GALUSHKO, P.N.: Master Tech Sci (diss) -- "Investigation of the kinetics of oxidation of carbon in a medium of carbon dioxide and water vapor". Moscow, 1959, published by the Acad Sci USSR. 13 pp (Acad Sci USSR, Inst of Mineral Fuels), 185 copies (KL, No 13, 1959, 104)

GALUSHKO, P.N.; KANTOROVICH, B.V.

Kinetics of the reaction of carbon with carbon dioxide and water vapor. Trudy IGI 11:39-45 '59. (MIRA 13:5)
(Carbon) (Carbon dioxide) (Water vapor)

GALUSHKO, P.N.; KANTOROVICH, B.V.

System of reactions involved in the interaction of steam with carbon. Trudy IGI 16:139-143 '61. (MIRA 16:7)
(Carbon) (Steam)

GALUSHKO, P.N.; KANTOROVICH, B.V.

Kinetics of the reaction C + H_2O at low temperatures. Trudy IGI 16:144-147 '61. (MIRA 16:7)
(Carbon) (Steam) (Chemical reaction, Rate of)

GALUSHKO, P.N.; KANTOROVICH, B.V.

Effect of H_2 and CO on the rate of the reaction C + H_2O. Trudy IGI 16:148-150 '61. (MIRA 16:7)
(Carbon) (Steam) (Hydrogen)

GALUSHKO, I.Ya.

Galushko, I. Ya. "Gravimetry and Tectonics." Trudy Neftianoi Konferentsii 1938, Kiev, 1939, pp. 157-215 and 293-304.

GALUSHKO, P. I.

Galushko, P. Ia. "Concerning the Origen of Salt Domes in the Ukrainian S.S.R. Trudy Neftianoi Konferentsii 1938, Kiev, 1939, pp. 217-226 and 293-304.

"Conference held 17-20 March 19[illegible]3 in Kiev on Contemporary [illegible] of the Origin and Development of the Earth" [illegible] Gorak and [illegible] Ya. Panasenko [illegible].

Iz Ak Nauk SSSR, Ser Geofiz, no 6, pp 971-973

Conference was organized by the Kiev regional branch of [illegible] (All-Union Scientific Society of Engineers and Technicians 'Mining') together with the Inst of Geol Sci, Acad Sci USSR, and the geol section of the Kiev House of Scientists. Participating in the conference were scientific workers and institute instructors, astronomers, geologists, geophysicists, geochemists of Moscow, Kiev, and L'vov. Reports were read by B.Yu. Levin, P. Ya. Galushko, Ye. S. Burksar, [illegible] Belousov and [illegible].F. Bilykhovskiy.

[illegible]

GALUSHKO, P.Ya.

[redacted]

Role of vertical and horizontal movements in tectonic development according to gravimetric data. Nauk.zap.Kiev. un. 12 no.4:87-92 '53. (MLRA 9:10)

(Earth movements)

GALUSHKO, P.Ya.

Physical nature of the gravitational field in the Pamirs and Tien Shan. Nauk.zap.Kiev.un. 12 no.4:93-96 '53. (MLRA 9:10)

(Pamirs--Geophysics) (Tien Shan--Geophysics)

GALUSHKO, P.Ya.

Natural characteristics of a gravitational field of oceanic regions.
Geol.zhur. 16 no.1:60-63 '56. (MLRA 9:8)
(Gravity)

GALUSHKO, P.Ya.

The degree of the relative equilibrium of the mass of the earth's crust in oceanic regions. Trudy Inst. geol. nauk AN URSR. Ser. geofiz. no.1:142-156 '56. (MLRA 10:8)
(Gravity) (Ocean bottom)

Galushko, P.Ya

PA - 2653

AUTHOR: SOLLOGUB, V.B., GALUSHKO, P.YA., VOPILKIN, A.A., PATIOKHA, A.M.

TITLE: On Certain Factors Influencing the Rate of Propagation of Elastic Vibrations in Rocks. (O nekotorykh faktorakh, vliyayushchikh na velichinu skorosti rasprostraneniya uprugikh kolebaniy v gornykh porodakh, Russian).

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 1, pp 82 - 85 (U.S.S.R.)

Received: 5 / 1957 Reviewed: 6 / 1957

ABSTRACT: The present paper investigates one of the most important factors influencing the velocity of layers, namely the static stress of higher layers. For the study of the connection between the velocity and static stress the authors carried out measurements of velocity rock samples which were subjected to different pressures. In laboratory investigations of the propagation of longitudinal elastic vibrations an impulse supersonic seismoscope was used. From the laboratory investigations discussed here and from the results of seismic observations in drill holes the following inferences can be drawn: The static stress of higher layers influences the properties of the different dispositions considerably. The higher the stress, the higher is the propagation velocity of elastic vibrations in rock. If the rock resembles a perfect elastic body, velocity depends only upon static stress and not upon geological processes

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which have taken place in this region. Rocks differing from these perfect elastic bodies have a remanent deformation. That is why the propagation velocity observed does not only depend upon the depth of the layer but also upon preceding geological history. The propagation velocity of rocks of equal age in different regions can therefore even be different if they are located in the same depth. A detailed analysis of velocities in rocks may offer indications as to the geological structure of the regions investigated and as to major disturbances in depositions.
(2 illustrations)

ASSOCIATION: Geological Institute of the Academy of Science of the Ukrainic SSR.
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress.

VOPILKIN, O.O. (Kiiv); GALUSHKO, P.Ya. (Kiiv); SOLLOGUB, V.B. (Kiiv).

Seismic method for measuring stresses in salt mine pillars [with summary in Russian]. Prykl.mekh. 3 no.2:229-232 '57. (MLRA 10:9)

1. Kiivs'kiy politekhnichniy institut.
(Salt mines and mining)

GALUSHKO, P.Ya.

Possible values of gravitational anomalies associated with various structures of the earth's crust. Trudy Inst. geol. nauk AN URSR. Ser. geofiz. no.2:79-93 '58. (MIRA 11:6)

1. Kiyevskiy politekhnicheskiy institut, gornyy fakul'tet.
(Gravity)

SOV/169-59-5-4384

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 5, pp 15 - 16 (USSR)

24.1800

AUTHORS: Sollogub, V.B., Galushko, P.Ya., Vopilkin, A.A., Patiokhi, A.M.

TITLE: On the Propagation Velocity of Longitudinal Elastic Waves in Rocks and Its Dependence on the Static Load and on the Humidity

PERIODICAL: Tr. In-ta geol. nauk. AS USSR, Ser. geofiz., 1958, Nr 2, pp 130 - 137

ABSTRACT: Investigating the effect of the load on the propagation velocity of elastic waves, the authors exposed a rock specimen with cubic form to a one-sided compression by means of a hydraulic press. The velocities of the supersonic waves were measured in intervals of pressure of 20 kg/cm^2. The velocity of wave in sandstone increased by 5 m sec^{-1}. atm for the pressure increasing from 0 to 120 kg/cm^2. Increasing the load from 120 to 420 kg/cm^2 causes an insignificant increase of the velocity, but a further increase of the load beyond 420 kg/cm^2 causes a decrease in velocity. Under a pressure of 610 kg/cm^2, the specimen collapsed. The similar

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SOV/169-59-5-4384

On the Propagation Velocity of Longitudinal Elastic Waves in Rocks and Its Dependence on the Static Load and on the Humidity

course of behavior of the velocity was observed by testing lime-stone, but the values of load corresponding to the points of inflection of the curve, and also the values of velocity were different. The observed variations of the velocity correspond to: 1) The decrease in the porosity under the pressure effect; 2) the redistribution of the elementary particles of the rock. A decrease in velocity with a further increase in pressure can be explained by the formation of cracks. A certain dependence exists between the density of the rocks and the propagation velocity of the elastic waves. It is possible that this dependence may be used for practical purposes. In halite specimens, the velocity of longitudinal waves perpendicular to the applied load decreased considerably with increasing pressure; but in the plane parallel to the applied load, the velocity insignificantly decreased. The saturation of the rock specimen with water increased the velocity; but the variations of velocity in chalk and for coquina were smaller than in less porous sandstone. The investigation of the variation of velocity under multiple cycles of loading and unloading showed that a residual deformation is not observed in dense rocks

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SOV/169-59-5-4384

On the Propagation Velocity of Longitudinal Elastic Waves in Rocks and Its Dependence on the Static Load and on the Humidity

(sandstone). In more porous rocks the value of the velocity increases in comparison to the initial velocity in consequence of the residual deformation after taking off the load. Be repetitive pressures, velocities increase again and attain higher values than during the first cycle of loading. Consequently, it can be assumed that the velocity of propagation of elastic waves in rocks depends on the geologic history of the region in question. In regions where numerous changes of sedimentation and of denudation occurred, the rocks were submitted to a greater compression and must be characterized by a higher velocity than the similar rocks in regions where the change of the processes took place not so frequent. Bibl. 10 titles.

I.K. Kupalov-Yaropolk

Card 3/3

GALUSHKO, P.Ya., dots., kand. tekhn.nauk; VOPILKIN, A.A., dots., kand.tekhn.
nauk; SOLLOGUB, V.B., dots, kand.tekhn.nauk; YUREVICH, G.G., inzh.

Experimental investigation of the effect of blasting on the stability of stope pillars in Solotvino salt mines. Nauch. dokl. vys. shkoly; gor. delo no.3:13-19 '58. (MIRA 11:9)

1.Predstavleno kafedroy razrabotki mestorozhdeniy poleznykh iskopayemykh Kiyevskogo ordena Lenina politekhnicheskogo instituta.
(Solotvino--Salt mines and mining)
(Mining engineering)

GALUSHKO, P.Ya., dots, kand.tekhn.nauk; VOPILKIN, A.A., dots., kand.
tekhn.nauk

Determining the coefficient of side thrust in rock salt, by measuring elastic wave propagation. Nauch.dokl.vys.shkoly; gor. delo. no.4:57-59 '58. (MIRA 12:1)

1. Predstavleno kafedroy razrabotki poleznykh iskopayemykh Kiyevskogo politekhnicheskogo instituta.
(Rock salt--Testing) (Shock waves--Testing)

GALUSHKO, P.Ya.

Method of calculating blocks under superstructures. Ugol' 33 no.3:22-24 Mr '58. (MIRA 11:3)

(Mine Buildings) (Mine surveying)

GALUSHKO, P.Ya., dots., kand. tekhn. nauk

Method of laboratory studying [illegible] in strain measurements. Nauch. dokl.vys.shkoly; gor. delo no.1:[illegible]. (MIRA 12:7)

1. Predstavlena kafedroy razrabotki mestorozhdeniy poleznykh iskopayemykh Kirovskogo politekhnicheskogo instituta.
(Mine surveying) (Strains and stresses--Measurement)

GALUSHKO, P.Ya. [Halushko, P.IA]

Correlation of values for isostatic and Bouguer anomalies. Geol. zhur. 19 no.1:57-67 '59. (MIRA 12:2)
(Gravity)

GALUSHKO, P.Ya., dotsent

Investigating the carrying capacity and calculation of inter-chamber pillars in rock salt mining. Izv. vys. ucheb. zav.; gor. zhur. no.9:13-20 '60. (MIRA 13:9)

1. Kiyevskiy ordena Lenina politekhnicheskiy institut. Rekomend. kafedroy razrabotki poleznykh iskopayemykh.
(Mining engineering) (Rock salt)

GALUSHKO, P.Ya. [Halushko, P.IA.]

Possibilities of studying the causes of vertical movements of the earth's crust on the basis of gravity anomalies. Geol. zhur. 20 no. 3:96-101 '60. (MIRA 14:4)
(Earth--Surface) (Gravity)

GALUSHKO, P.Ya. [Halushko, P.IA.]

Effect of the crustal structure in oceanic areas on isostatic anomalies. Geol. zhur. 20 no. 5:18-28 '60. (MIRA 14:1)
(Earth—Surface) (Isostasy)

S/008/60/020/003/003/003
B016/B067

AUTHOR: Galushko, P. Ya.

TITLE: Possibilities of studying the causes of vertical movements of the earth's crust on the basis of gravitational anomalies

PERIODICAL: Geologichnyy zhurnal, v. 20, no. 3, 1960, 96-101

TEXT: The author states that vertical movements are one of the most decisive factors in the general evolution of the earth's crust; the nature of these movements, has, however, not been sufficiently investigated. The geophysical studies, especially gravimetric measurements, play an important part when investigating the causes of vertical movements. The author arrives at the conclusion that: 1) the identification of processes occurring in the interior of the earth on the basis of recent gravimetric data is extremely complicated; 2) the fundamental problems of tectogenesis can be solved only on the basis of a large number of comprehensive measurements of gravimetric anomalies. The rules which hold for one type of fields of gravity do not always apply for other types. 3) Many scientists are of the opinion that the vertical movements of the earth's

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crust were caused by processes taking place at great depths. This causes either changes in the material density or displacements of subcortical masses. 4) The author states that Ye. M. Lyustikh (Ref. 7) and S. I. Subbotin (Ref. 9) arrived at completely opposite conclusions concerning the causes of vertical movements, since their studies were based on an insufficiently founded structure of the earth's crust. 5) According to the author, it is possible to explain the field of gravity in the Ukrainian crystalline shield and the Dnepr-Donets basin which can be measured by instruments, without assuming displacements or volume changes of the subcortical substance (Refs. 7-8). 6) The structural scheme suggested by the author is based on the assumption that the surface of the basalt sphere and the subcortical substance at the border between the Ukrainian shield and the Dnepr-Donets basin is not reproduced in the relief by the depression of the surface of the granite sphere. Hence, differences of - 75 mGal were found between calculated and measured anomalies for the shield and the depression, whereas the data of S. I. Subbotin are - 350 mGal. 7) In the basin, the change of the rock density (O. M. Timofeyev, Ref. 10) can be of importance also for the intensity of the anomalies. 8) The author regards the conclusions drawn by

Ye. M. Lyustikh (and by V. O. Magnitskiy, Ref. 8), on the one hand, and by S. I. Subbotin, on the other, as insufficiently substantiated. Besides, Ye. M. Lyustikh did not consider the density values. 9) The author substantiates his opinion by examples from anomalies in the ocean, on the Pamir, the Crimea, and in Tien Shan (G. A. Gamburtsev and P. S. Veytsman, Ref. 5). The following papers are mentioned: A. D. Arkhangel'skiy (Ref. 1), V. V. Belousov, G. P. Gorshkov (Ref. 6), M. S. Molodens'kyy, P. M. Nikiforov, V. O. Sel'skiy, V. V. Fedyns'kyy, and M. S. Shats'kiy. There are 10 Soviet-bloc references.

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GALUSHKO, P.Ya. [Halushko, P.IA.]

More about the possibilities of studying the causes of epeirogenic movements along gravity anomalies. Geol.zhur. 21 no.5:105-108 '61. (MIRA 14:10)

1. Institut geofiziki AN USSR.
(Geology, Structural)

GALUSHKO, P.Ya.

Possibility of studying crustal structure on the basis of gravity anomalies. Geofiz.sbor. no.1:56-63 '62. (MIRA 16:3)

1. Kiyevskiy politekhnicheskiy institut.
(Earth--Surface) (Gravity anomalies)

GALUSHKO, P.Ya., dotsent

Results of studying the state of stress of rocks by means of tensiometric measurements. Izv. vys. ucheb. zav.; gor. zhur. 5 no.3:52-56 '62. (MIRA 15:7)

1. Kiyevskiy ordena Lenina politekhnicheskiy institut. Rekomendovana kafedroy razrabotki mestorozhdeniy poleznykh iskopayemykh Kiyevskogo politekhnicheskogo instituta.
(Rock pressure) (Tensiometers)

BORISENKO, S.G., prof.; TUBOL'TSEV, V.M., inzh.; GALUSHKO, P.Ya., dotsent

Comparison of the results of studying stresses around workings by the photoelastic method and by actual measurement. Ugol' 39 no.2: 19-21 F '64. (MIRA 17:3)

1. Dnepropetrovskiy gornyy institut (for Borisenko, Tubol'tsev).
2. Kiyevskiy politekhnicheskiy institut (for Galushko).

GALUSHKO, P.Ya.

Isostasy and isostatic compensation. Geofiz. sbor. no.7:118-125 '64. (MIRA 17:11)

1. Kiyevskiy politekhnicheskiy institut.

GALUSHKO, P.Ya.

Dependence of the magnitude of the Bouguer anomaly on the crustal thickness. Geofiz.sbor. no.1:27-31 '65.
(MIRA 18:12)

1. Kiyevskiy politekhnicheskiy institut. Submitted November 4, 1963.

GALUSHKO, S. A.

1248. Oborotnyye sredstva ugol'nykh shakht i puti uskorenya ikh oborachivayemosti. (V usloviyakh tresta "Shakhtantratsit" kombinara "Rostovugol'"). Dnepropetrovsk, 1954. 18s. 20sm. (M-vo Vyssh. obrozovaniya SSSR. Khar'k. inzh.-ekon. in-t). 100 ekz. B. ts. - [54-54845]

SO: Knizhnaya Letopis, Vol. 1, 1955

147

AUTHOR: Galushko, S.A., Candidate of Economic Sciences (Dnepropetrovsk Interprovinces Party School) and Rossikhina, E.I. (Dnepropetrovsk Coke Oven Works.)

TITLE: Comments on the paper of N.I. Gorodetskiy "The distribution of coking costs between coke, gas and by-products" (Otliki na stat'yu N.I. Gorodetskogo "Raspredelenie zatrat na koksovanie ugley mezhdu koksom, gazom i produktami ulavlivaniya"

PERIODICAL: "Koks i Khimiya" (Coke and Chemistry), 1957, No. 2, pp. 50 - 51, (U.S.S.R.)

ABSTRACT: A strong criticism of the method proposed (Koks i Khimiya, 1956, No. 6) is expressed.

GALUSHKO, T.Ye.

Psychological views of Taras Hryhorovych Shevchenko, 1814-1861. Vop. psikhol. 10 no.3:6-14 My-Je '64. (MIRA 17:9)

1. Kiyevskiy universitet imeni T.G. Shevchenko.

GALUSHKO, V.M.: LUKANIN, A.V.; LUT, A.A.; FISHMAN, P.S.

Spectrochemical determination of zirconium in the built-up layer of rolls. Zav. lab. 30 no.1:47 '64. (MIRA 17:9)

1. Makeyevskiy metallurgicheskiy zavod.

GALUSHKO, V.P.; LOSHKAREV, Yu.M.

Some particular features of a simultaneous discharge of manganese and hydrogen ions. Trudy DKHTI no.16:59-64 '62
(MIRA 17:8)

GALUSHKO, V.P., LOSHKAREV, Yu.M.

Effect of a simultaneous adsorption of organic additions and anions on electroreduction of metals. Zhur. fiz. khim. 39 no.5:1185-1189 My '65. (MIRA 18:8)

1. Dnepropetrovskiy gosudarstvennyy universitet.

GALushKo V. P.

Reasons for the Formation of Powdery Cathodic Deposits of Metals [Copper]. V. P. Galushko and E. F. Zavgorodnaya (*Trudy Soveshchaniya po Elektrokhimii 1950*, 1953, 482–487).—[In Russian]. To study the mechanism of the prodn. of Cu powders by electrolysis, G. and Z. used a 50-ml. beaker contg. $CuSO_4$ soln., with a central cathode of Cu wire (0·8 mm. mm. dia.) and a Pt or Cu spiral of wire around the wall as anode; polarization curves were taken. At high c.d., deposition of black Cu powder is not the primary process; H begins to be liberated at the cathode and then reduces Cu^{2+} ions to metallic Cu. Other experiments in support of this conclusion are described. Thus, on electrolysing Na_2SO_4 soln. in which is inserted a tube contg. 5% $CuSO_4$ soln. sealed at the base with Cellophane and placed just above the cathode, black Cu powder appears within the tube.

—G. V. E. T.

GALUSHKO, V.P.; BONDAR', V.V.

Anode behavior of aluminum in the course of electrolytic polishing.
Ukr. khim. zhur. 31 no.4:359-363 '65. (MIRA 18:5)

1. Dnepropetrovskiy gosudarstvennyy universitet.

Galushko USSR

V. P. GERM

Electrolytic polishing of metals. II. Anodic behavior of steels. P. M. Fedash and V. P. Galushko. *Nauch. Zapiski Dnepropetrov. Gosudarst.* [illegible] (1951); *Referat. Zhur., Khim.* 1954, No. 33005.—By using the method of polarization curves, the anodic behavior of C steels RF-1 and RI-202 was studied in pure H_3PO_4 (sp. gr. 1.6) in a mixt. of 15% H_3PO_4 plus 85% H_2SO_4 (sp. gr. 1.84), and in a soln. of H_3PO_4 + H_2SO_4 + CrO_3 100 g./l. The polarization curves were obtained by the usual compensation methods, the strength of the current being maintained until a const. potential (*V*) was established. At small c.d. the anodic dissoln. of Fe was accompanied by evaluation of H. On the current-potential curves was a flat area corresponding to limiting current (*D*) which depended on the compn. of the electrolyte, its concn., and the nature of the anode. For the steel RF-1 in H_3PO_4, *D* was in a semilogarithmic relation to the concn. of the acid. In H_3PO_4 and in H_3PO_4 + H_2SO_4 both steels behaved alike. Compared with these steels, C steel had a higher value of *D*. In the presence of CrO_3, all the steels had the same value of *D* which was rather small. Attainment of *D* was connected with an increase of *V* to a certain value independent of the concn. of the electrolyte. The changes in *V* took place at an increasing rate which changed to a jump. III. *Nauch. Zapiski Dnepropetrov. Gosudarst. Univ.* 43, 127-36 (1953); *Referat. Zhur., Khim.* 1954, No. 33006.—The anodic film which formed in the course of anodic dissoln. of metals was studied. The results confirmed the theory of microelectrochem. dissoln. of metals. With an arrangement of: horizontal anode|a thin layer of CCl_4|electrolyte|cathode| it was shown in principle that it was possible to smooth unevenness of the surface by anodic dissoln. through a layer of a dielec. With Cu-Fe and Cu-Zn micro pairs it was shown that metals different in their phys.-chem. properties dissolved anodically at the same rate at certain definite c.ds. and a corresponding electrolyte. A study of the temps. of the anode and the cathode during electropolishing showed that when the limiting current was reached, there was an anode film having a high elec. resistance. The mechanism of electrode electropolishing was discussed. M. Hosch

Galushko, V.P.

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USSR

Secondary electrochemical processes on a working electrode. E. F. Zavgorodnyaya and V. P. Galushko. *Nauch. Zapiski Dnepropetrov. Univ.* 43, 137-40(1953); *Referat. Zhur., Khim.* 1954, No. 25042.—Secondary processes occurring in electrolysis are ordinarily considered to be purely chem. However, further investigation shows them to be of electrochem. nature. Expts. in obtaining loose deposits of metals (Cu and Fe) at some distance from the cathode beyond a cellophane partition, in a space well screened and free of force lines, showed that the processes are electrochem. and they take place because secondary galvanic cells are formed on the cathode with areas of metal satd. with H acting as neg. electrodes. These phenomena account for the possibility of rejuvenating the active mass of a neg. electrode in an alk. battery, despite the screening action of the electrode's surface. This is due to a secondary galvanic cell giving the reaction $H_2 + Fe(OH)_2 \rightleftarrows Fe + 2H_2O$. The reduced Fe in which H dissolves acts as the H electrode of this cell. It is suggested that the presence of active H on the cathode is more favorable for the formation of secondary cells than the presence of mol. H.

M. Hosch

CH

1

USSR/Chemical Technology - Chemical Products and Their Applications - Electrochemical Manufacturing. Electrodeposition. Chemical Sources of Electrical Current. I-9

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, 8903

Author : Krichmar, S.I., and Galushko, V.P.
Inst :
Title : On the Suppression of Structural Etching During Electrolytic Polishing.

Orig Pub : Zh. Fiz. Khimii, 1956, 30, No 3, 577-580 (summary in English)

Abstract : The mechanism of the suppression of macrostructure etching (E) in the region of limiting current during the electrolytic polishing of metals is discussed. The suppression of macrostructure E. of pure Cu and its alloys during electrolytic polishing is H_3PO_4 solutions is investigated.

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USSR/Chemical Technology - Chemical Products and Their Applications -- Electrochemical Manufacturing. Electrodeposition. Chemical Sources of Electrical Current. I-9

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, 8903

It is shown that the greatest suppression of E occurs in pure metals; in alloys the concentration polarization is insufficient for the complete suppression of E. In the latter case polishing may not take place in the region of limiting current if the differences between the chemical elements constituting the alloy is sufficiently great. At not-too-high anode potentials (at the onset of the limiting current plateau) some E of the surface must occur but its extent is very small and does not interfere with the production of a polished surface.

Card 2/2 Dnepropetrovskiy gosudarstvennyy universitet

GALUSHKO, V.P.

USSR/Electrochemistry B-12

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26306

Author : G.A. Yemel'yanenko, V.P. Galushko

Title : Nonsteady Processes at Electrolysis of Copper and Nickel Solutions.

Orig Pub : Zh. fiz. khimii, 1956, 30, No 8, 1710-1717

Abstract : The importance of studying the time dependences of the electrode potential (φ) and the current density (i) was discussed in reference to the kinetics of electron processes, and the changes of φ and i in time (τ) was studied at a constant voltage on the electrolizer at the electro-deposition of Cu and Ni. Cu was deposited from a solution of 0.1 n. of $CuSO_4$ + 0.5 n. of H_2SO_4 at 20 to 22°. It was shown in the case of electrodeposition of Cu, that i has a great magnitude at the beginning of the electrolysis (two seconds after switching in) and that it decreases with time, to which the rise of the negative φ in time corresponds and which is explained by the considerably great magnitude of the concentration polarization. If some gelatin was added to the Cu electrolyte (0.01 g per lit), the magnitude of the initial current at a low electrolizer

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USSR/Electrochemistry B-12

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26306

voltage (up to 0.16 - 0.17v) decreases in comparison with the solution without the addition, and, besides, the current strongly decreases with time, which indicates a strong retardation of the process; a slow rise of the negative φ corresponds to it. A considerably high increase of the current takes place at greater voltages, which in the opinion of the authors is caused by the potential of gelatin desorption having been reached. It is shown on an example with Cu that it is possible to estimate the applicability of either method of surface preparation by the method of curves (i, t) and (φ, t). Ni was deposited from a solution of 0.5 n. of $NiSO_4$ + $(NH_4)_2SO_4$ (12 g per Lit) + NaCl (5 g per lit) (pH = 4.8) at 20 to 22°. The curves (i, t) in case of Ni are characterized by a little initial decrease of i with a following sharp rise of the current, to which not a decrease, but an increase of the negative φ of the electrode corresponds. The curves (i, t) are of the same character in the same solution without $NiSO_4$. The anode φ rises sharply at the beginning and, after that, drops. The opinion is expressed that φ is redistributed between the cathode and the anode, in consequence of which φ and

Card : 2/3

USSR/Electrochemistry B-12

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26306

i rise on the cathode. In solutions free of NaCl, or if the Ni anodes were replaced with graphite ones, the abnormal course of the cathode curves (i, t) and (ψ, t) is eliminated. The authors explain the initial retardation at the electrodeposition of Ni by the retardation of the activation of Ni-anodes by Cl^- ions. The cathode process accelerates together with the activation of the Ni-anodes in consequence of the greater ψ falling on the cathode.

Card : 3/3

GALUSHKO, V.P

2 4

Reaction products from the electrochemical polishing of copper in phosphoric acid. S. I. Krichmar and V. P. Galushko. *Zhur. Neorg. Khim.* 1, 2422-4(1956). The compn. of the reaction products was detd. for the case of the anodic soln. of Cu in H_3PO_4. The general formula for the reaction products was $xCu(H_2PO_4)_2 \cdot yH_3PO_4$. J. R. L.

RM

GALUSHKO, V.F.

USSR/Physical Chemistry - Electrochemistry. B-12

Abs Jour : Referat Zhur - Khimiya, No 6, 25 March 1957, 18710

Author : Krichmar, S.I., Shapunov, L.A., and Galushko, V.F.

Title : On differential Capacitance of Copper Anodes in Phosphoric Acid.

Orig Pub : Zh. fiz. khimii, 1956, 30, No 7, 1452-1454

Abstract : In order to elucidate why a limiting current (i_{lim}) appears in the case of electropolishing of Cu in solutions of H_3PO_4 the authors studied the dependence of differential capacitance (C) of the electrode on the potential (φ), and polarization curves were taken. The measurements were carried out on rods made of electrolytic copper, $\alpha + \beta$-brass and Al-bronze in 3,5,10 and 15M of H_3PO_4. Differential capacitance was measured by method of comparison at frequency 3.5 kgc. On the (C, φ) curves when (φ) corresponds to the beginning of area (i_{lim}) (0.15-0.20 v. against saturated k.e.) a sharp

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maximum is observed; at (φ) equal to 1.3-1.6 v. there is a second maximum of (C). The authors are of the opinion that the first maximum and subsequent fall of (C) are connected with the fact that in the region of the area (i_{lim}) a film was formed on the anode,

about 10^{-7} cm. thick, consisting of the products of reaction; as to the second maximum, preceding the discharge of oxygen, it was due to the formation of an oxidized layer on the surface of metal. At 1 M H_3PO_4 the maximum of (C) is weaker.

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Effect of sulfuric acid solutions on metallic copper at various temperatures. Zhur. neorg. khim. 2 no.12:2834-2837 D '57.
(Copper sulfate) (Copper oxides) (MIRA 11:2)